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FM BUMED WASHINGTON DC//00//  
SUBJ/PUBLIC AFFAIRS-NAVAL SERVICE MEDICAL NEWS (NSMN) (93-43)//  
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RMKS/1. THIS SERVICE IS FOR GENERAL DISTRIBUTION OF INFORMATION AND NEWS OF INTEREST TO NAVY AND MARINE CORPS MEMBERS, CIVILIAN EMPLOYEES, DEPENDENTS, AND RETIRED BENEFICIARIES OF NAVY MEDICINE. MAXIMUM AND TIMELY REDISTRIBUTION OR FURTHER REPRODUCTION AND USE BY ACTION ADDRESSEES IS ENCOURAGED. THIS MESSAGE HAS BEEN COORDINATED WITH THE COMMANDANT OF THE MARINE CORPS (CMC). THE COMMANDANT HAS AUTHORIZED TRANSMISSION TO MARINE CORPS ACTIVITIES.

2. RESPECTFULLY REQUEST FLEET COMMANDERS READD TO SHIPS AND OTHER SUBORDINATES WITH MEDICAL PERSONNEL, AS OPERATIONAL CONDITIONS PERMIT.

3. HEADLINES AND GENERAL INTEREST STORIES THIS WEEK:  
(930418)-Twenty-six Years Later, Corpsmen Receive Bronze Stars  
(930419)-Navy Medical Researcher Crucial in Gene Discovery  
(930420)-Immune System Research Opens New Doors  
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HEADLINE: Twenty-six Years Later, Corpsmen Receive Bronze Stars  
THE PENTAGON, Washington (NSMN) -- In a ceremony 26 years after the event, HM3 Barry Ronald Smith and HN Robert R. Wilson were recognized as heroes by Secretary of the Navy John H. Dalton, who presented them with Bronze Stars in front of a packed room of family, friends, dignitaries and media.

"One of the great privileges of this position," said Dalton, "is recognizing extraordinary actions on the part of the men and women in uniform.

"Normally this sort of thing takes place shortly after the event. In this case, the event was more than a quarter century ago."

Dalton explained the delay, saying, "Their actions were extraordinary, and so too were the events following their heroic efforts. Their unit remained under siege, and paperwork, understandably, took a back seat to survival. Then Ron Smith and Bob Wilson were transferred, and the paperwork never caught up with them." Until now.

On 10 November, the 218th birthday of the U.S. Marine Corps and the eve of Veterans Day, the Navy recognized the unselfish actions of veterans Smith and Wilson, who ran into a minefield not once, but twice, to render aid to two fallen Marines and

remove them from danger.

The award presentation, held in the elegant Pentagon dining room of the Secretary of the Navy, seemed greatly removed from the destructive scene recounted in the citation. As the ceremony progressed, the years and the emotions separating the two scenes began to fall away.

In accepting the long delayed awards, both men hailed others as the heroes, not themselves. Wilson took the opportunity of the Marine Corps birthday to reflect on all Marines who, over the Corps' 218 years, "paid the price of freedom, for God and country. ... They are the heroes, and may they rest in peace."

Smith talked of the pride he felt when he had returned home from Vietnam, the joy of greeting his family again, and the obligation he felt he owed those who'd not returned -- to live a full life. "Two weeks ago at the Wall, my first time there, I didn't think of sadness, death and dying," he said. "I thought of happy faces. The teenage jokes we played on each other. We were kids; we used Clearasil, not shaving cream." And in remembering those friends, those who died and those who returned, Smith's voice became slightly ragged as he battled his emotions. "I feel so proud," he said. "God bless the Marine Corps. God bless our families. God bless this great nation of ours."

From among those gathered, a reverent "God bless America" punctuated Smith's closing remarks. The crowd held many people who had served in Vietnam, or whose lives had changed because of the War. Dignitaries included Deputy Surgeon General Richard I. Ridenour, MC, USN, and Maj. Gen. D.A. Richwine, USMC.

Richwine, who was representing the Commandant of the Marine Corps, gave the first hint that the ceremony would turn into an emotional reunion.

Smith and Wilson received their Bronze Stars for actions taken on 15 August 1967 while serving as corpsmen with the 3rd Battalion, 4th Marines, 3rd Marine Division, Kilo Company in the Republic of Vietnam. As an infantry lieutenant, Richwine had served in Kilo Company in 1966, and he is now a member of the 3rd Battalion, 4th Marines Association.

Retired CDR Leo Stanis was also in attendance. He was Kilo Company's chaplain and had initiated actions to see Smith and Wilson finally recognized for the heroic actions he had witnessed in 1967. Stanis thanked Randy Paige for his assistance in bringing today's ceremony to fruition.

Paige is a reporter for "The Crusaders," a nationally syndicated television show whose reporters find solutions to their stories. After the chaplain's remarks, Paige took his story from solution to reunion, bringing up several special guests.

Platoon leader LT Peter Wymes, USMC, was first up; he had not seen Smith and Wilson since Vietnam.

The next guests were even more poignant: parents of the two Marines the corpsmen had risked their lives trying to save. The mother of one of the Marines struggled to maintain her composure; she had not realized her son had died surrounded by friends. "He was in good company," she said. "If I couldn't be there," she started, then dissolved into tears and into Wilson's arms.

"Your son was a hero," he told her, then repeated what so many corpsmen have said before, in actions and in words: "We did our best."

Story by Liz Lavallee, BUMED Public Affairs

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SIDEBAR: Corpsmen Recognized for Service and Sacrifice

BUMED Washington (NSMN) -- In Vietnam, Hospital corpsman was the most decorated enlisted rate. For actions during that war, corpsmen received three Medals of Honor, 29 Navy Crosses, 127 Silver Stars, two Legions of Merit, 290 Bronze Stars -- now 292, and 4,563 Purple Hearts. Many of these medals were awarded posthumously; 620 hospital corpsmen were killed in action during the Vietnam War.

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HEADLINE: Navy Medical Researcher Crucial in Gene Discovery

REPLIGEN CORP., Cambridge, MA (NSMN) -- Researchers have discovered a new molecule that may be instrumental in regulating specific human immune responses, as reported in two papers in the 4 November issue of Science.

Gary Gray, Ph.D., who headed the research team that identified molecule B7-2, explained its importance: "This discovery may lead to the development of therapeutics that can specifically inhibit an undesirable response without suppressing the entire immune system."

The generation of a normal immune response to foreign invaders such as viruses and microorganisms requires the interaction of several components of the immune system, including antigen presenting cells (APC) and T cells. The research team believes that B7-2 is the critical co-stimulatory molecule responsible for initiating an immune response and that blocking its signal will allow antigen-specific suppression of an immune response.

Current therapies provide general, non-specific immune system suppression that leaves patients vulnerable to bacterial and viral infections. The ability to selectively inhibit immune system response would be especially useful in organ transplants, said Gray, which our immune system considers intruders it would seek to destroy. Gray also said the targeted therapeutics would have applications "in debilitating autoimmune diseases such as certain forms of multiple sclerosis, rheumatoid arthritis and diabetes."

A crucial step toward discovery of B7-2 was taken by CDR Carl H. June, MC, USN, and Craig B. Thompson, who identified B7-1, for which the Navy holds the patent. While B7-1 was known to interact with CTLA4, a T-cell receptor, it generated only a partial immune response. The partial response suggested to researchers that another factor must exist to stimulate an immune response. This led to the discovery of B7-2, which also binds to CTLA4 and has been shown to co-stimulate the immune response. B7-2 apparently delivers a second co-stimulatory signal that is required to generate an immune response.

"Since 1989, we've known that T cells only become active

when they have been stimulated by both an antigen and a co-stimulatory factor, initially referred to as B7," said Lee M. Nadler, M.D. "The studies in today's Science demonstrate the existence of a second molecule, B7-2, that may be the immune system's initial 'decision maker.' Since B7-2 is continuously expressed by T cells, it may provide an earlier signal than B7-1, which is not expressed until some time after an immune response has been activated. We are conducting additional studies to confirm our hypothesis that B7-2 provides the initial co-stimulatory signal necessary to activate an immune response."

B7-2 was discovered by a collaborative research team of leading immunologists coordinated by Gray, Repligen Corporation's director of molecular biology in discovery research, Cambridge, MA; Nadler, Dana-Farber Cancer Institute, Boston; Jeffrey A. Bluestone, Ph.D., and Thompson, University of Chicago; and June, Naval Medical Research Institute, Bethesda, MD. The Navy has a Cooperative Research and Development Agreement with Repligen Corporation.

Story based on release from Clare Clifford, director, Corporate Communications, Repligen

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#### HEADLINE: Immune System Research Opens New Doors

NMRI Bethesda, MD (NSMN) -- Researchers at the Naval Medical Research Institute's Immune Cell Biology Program are working on the development of a therapy that will allow them to better understand T cells, which are central players in developing both good and bad immune responses.

According to NRMI endocrinologist CDR David M. Harlan, MC, T cells hold the key that may open the door to new life-saving techniques. If researchers can understand what activates those cells, they will be able to understand what activates the immune system.

Harlan explained: "The T cells act as sentries, and their job is to circulate through the body looking for something that is foreign and kill it. They also act as the quarterback of the immune system, directing responses. We need T cells. A classic example of disease where you don't have T cells is AIDS. HIV, the AIDS virus, destroys the T cells of the immune system, and without those T cells there to direct things, one may succumb to virtually any infection."

He said that the main goal of researchers is to learn how to control the T cell -- how to make it accept cells and tissues they want it to accept, like a transplanted organ, and how to make it reject things they want it to reject, like cancer cells. "We want to know how to make it become activated when it needs to be and how to prevent it from becoming activated when we don't want it to be," said Harlan.

Researchers know that T cells generate an antigen-specific T-cell receptor. A receptor is a protein on the surface of cells with the function of binding to specific hormones, growth factors or targets.

"We all have millions of different receptors on our T cells," said Harlan, "but each individual T cell has only one

specific antigen it's always 'looking for;' its own very specific area of expertise."

Harlan said that in order for a T-Lymphocyte to become activated, it has to see the antigen it is designed to recognize through its receptor. It also has to receive a second, or co-stimulatory signal (see previous article on the B7-2 molecule). "If the T cell sees its antigen and gets that co-stimulatory signal, it knows to destroy that target," he said.

"For example, during a viral infection, the T-Lymphocyte 'sees' cells infected with a virus and also gets a co-stimulatory signal. The T-Lymphocyte is thus activated, and it kills the infected cell, limiting the infection. A similar process happens when we are given organ transplants. Our T cells become activated and reject the graft.

"We want to know how T cells can differentiate between invading antigens and you."

Harlan referred to the research efforts at the University of Chicago, saying that researchers there gave mice a drug that kills the portion of the pancreas that makes insulin, the beta cells, in the Islets of Langerhans. This made the mice diabetic. They then took human Islets of Langerhans and transplanted them into those mice that were now diabetic. That cured the diabetes for two or three days, but then the mice rejected the human islets, became diabetic again, and died.

These researchers then transplanted human islets into another group of diabetic mice, but this time also administered a reagent that prevented T-Lymphocyte co-stimulation. The drug, given for two weeks only, prevented the rejection process. The mice were watched for six months and they never became diabetic, never rejected the human islets. As far as those mice were concerned, the human Islets of Langerhans were mouse tissues. The immune system of those mice was otherwise normal.

Subsequent tests backed up these findings, that a very specific state of immune tolerance had been created, that the mouse immune system had recognized the islets from the original donor to which it had been tolerized. Those results support the contention that it should be possible to transplant tissue from an animal into a human with a reagent similar to the one they gave the mice.

Harlan is very enthusiastic about the possibilities this offers. "We're talking about developing a therapy that will allow us to transplant an organ from an animal to a human suffering from disease due to defective organ function. A drug would then be given for a short time to prevent lymphocyte co-stimulation, prevent rejection, and cure the disease. The organ could be a heart, a kidney, a liver or Islets of Langerhans to cure heart failure, kidney failure, liver failure or diabetes, respectively.

"So far, this has been done only from human to mouse. Because it works in that mammalian system, it should be possible to develop a similar strategy for transplanting animal organs into man.

"A pig's heart is very similar to a human's. We want to be able to use this technology to save human lives. Pigs are used

for meat and shoes, but all those hearts get thrown away. We want to give a new heart, followed by two weeks of therapy, giving the patient's T cells those two weeks to learn to recognize the new heart, then leave it alone. This would not be painful. Nobody's hair would fall out."

In addition to transplant rejection, diabetes is a special interest of Harlan's. He feels deeply about the suffering this illness causes, especially in cases involving children. "The diabetes that kids get, called type 1 diabetes, is a horrible illness. Affected individuals suffer with more heart disease, kidney failure, blindness, limb loss and premature death.

"As it stands now, we can give insulin, but that's only a treatment, not a cure. I am dedicated to this research because all of our therapies to date have been directed toward doing our best to manage a bad situation. We need to learn how to prevent the disease or cure it instead of merely controlling it.

"We now have an extensive body of evidence that diabetes is a T-cell autoimmune disease. T cells go in and direct the killing of the cells in the pancreas that make insulin. Other autoimmune illnesses, like thyroid disease, are also mediated by inappropriately activated T-Lymphocytes.

"Autoimmune illness is an illness caused by your immune system attacking something that it shouldn't. It is attacking you. It is recognizing a certain tissue of your body as abnormal and getting rid of it, even though it is not abnormal."

Harlan's idol is Dr. Frederick Banting, who won the Nobel prize for discovering insulin.

"He was a GP (general practitioner) who went to a lab in Toronto and asked to use it for experiments. He was given a lab for the summer, received no money and lived in a one-room place. He got a medical student, and the two of them worked all summer looking for the protein that would cure diabetes. Over the next couple of years, he was able to purify and crystallize insulin. It was a miracle, an inspirational story.

"When it became obvious that insulin was going to be a miracle drug, Banting was offered millions of dollars for rights to it. He sold the patent rights to Lilly for one dollar. His answer to that was, 'I didn't do it for the money. I did it to cure diabetes.'"

Story by Teal Ferguson, Journal staff writer

Reprinted from The Journal, 4 November 1993

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**HEADLINE: Reserve Medical Corps Officer Achieves a First**  
MSU East Lansing, MI (NSMN) -- Doctor of Osteopathy Barbara Ross-Lee, associate dean for health policy at Michigan State University's College of Osteopathic Medicine, has been named dean of the Ohio University College of Osteopathic Medicine, Athens, OH. She becomes the first black woman to lead a medical school in the United States.

Ross-Lee, who received her doctorate from MSU in 1973, is a county medical examiner and a captain in the U.S. Naval Reserves' medical corps. From 1983-1991, she was chair of the Department of Family Medicine in MSU's College of Osteopathic Medicine.

Reprinted from MSU's Alumni Magazine, Fall 1993

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**HEADLINE: Navy Doctor Praises Military Opportunities**

OHIO STATE Columbus, OH (NSMN) -- LT Leon McDougle, MC, has wanted to be involved in health care for as long as he can remember. In addition to his interest in science and his desire to improve the quality of people's lives, McDougle credits the influence of a man he never met in helping make his career in medicine a reality.

Growing up in Sandusky, OH, McDougle for years heard stories about Dr. Waudell William Hunter, an African-American family practitioner in Sandusky who saw a wide variety of patients. "I never met Dr. Hunter," says McDougle, "but I grew up hearing stories about how he would accept chickens and farm produce from patients who were unable to pay him. He became a real inspiration to me."

Years later, while reviewing a listing of African-American alumni of The Ohio State University College of Medicine, McDougle was delighted to discover that his mentor was an alumnus of Ohio State's medical school, graduating in 1934. "I can't describe what I felt when I saw his name listed in the program," says McDougle. "Dr. Hunter helped pave the way for me and other African-Americans to get our medical degrees."

The oldest of five children, McDougle graduated in 1985 from the University of Toledo with a BA in biology. He entered the College of Medicine on a naval scholarship and graduated in 1989.

Upon graduating from Ohio State, McDougle entered a family practice residency at Naval Hospital Camp Pendleton, CA. "I enjoy the whole concept of family practice," he says. "The name says it all. There's a wide variety of medicine involved in treating the total family. I enjoy children and elderly people; I also enjoy delivering babies. In family practice, I'm not limited in what I can do."

The Navy has allowed McDougle to expand his professional horizons. In April, he returned from a six-month Western Pacific tour of duty to Singapore, Thailand, the United Arab Emirates, the Persian Gulf and Africa. During the deployment, he served aboard USS Tripoli (LPH 10) as a member of fleet surgical team five. Tripoli was the major surgical platform for the initial six weeks of Operation Restore Hope in Somalia.

"In the Navy, I have seen cases that I probably wouldn't see in a civilian practice," says McDougle. "For example, in Somalia I had the opportunity to take care of patients suffering from malaria and illnesses caused by various other parasites. I also have applied to take a tropical medicine course held in Puerto Rico and the Dominican Republic to increase my proficiency in treating such diseases."

Of all McDougle's experiences in the Navy, his trip to Africa had the most profound effect on him. "This has been my first trip to Africa, but definitely not my last," he says. "There is a large public health problem in Africa. The continent has a population of 600 million and a \$290 billion debt. In a continent where the number of HIV cases is skyrocketing, the

total budget for health care amounts to about \$10 per person per year."

In his free time, McDougle and his wife, Natasha, an English professor at El Dorado Community College, enjoy going to concerts and traveling through California. His future career goals include teaching in a family practice residency program, returning to school for a master's degree in public health, and continuing to talk to youth of all ages about how to better prepare themselves for college and the various issues they will face in today's society.

McDougle is the secretary and treasurer for the aerospace, military and occupational medicine section of the National Medical Association. He is also a diplomate of the Board of the American Academy of Family Physicians and a member of the Uniformed Services Academy of Family Physicians.

Reprinted from The Ohio State University College of Medicine Journal, Summer 1993

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**HEADLINE:** Yes, You Do Want that American Express Card

BUMED Washington (NSMN) -- Frequent government travelers have been using a government-issued Diners Club credit card for several years now. That's soon to end. The government's new contract, which begins 30 November 1993, is with American Express. So, don't cut up your card from American Express when it comes "unsolicited" in the mail. And don't be too hasty in cutting up your Diners Club card -- you'll need it for any travel you take before 30 November.

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**HEADLINE:** HEALTHWATCH: Staff Member Shows Healthy Weight Loss

NAVHOSP Camp Pendleton, CA (NSMN) -- The Navy Physical Readiness Test a recurring requirement that includes Navy personnel being measured for their fat percentage.

Passing "the test of the tape" has become increasingly difficult, especially with the termination of the overfat category.

This is the problem HM3 Amy Culver wished to address in the hospital's recent Wellness Fair. She did so by sharing her personal struggle on how she finally was able to control her weight problem.

"The Command Wellness Program works," said Culver. "There are a lot of people out there who are angry and probably scared, but if they lose the weight, those negative feelings would be replaced by a sense of accomplishment."

Culver said that first you have to admit you have a weight problem and be motivated to correct it. When she reported to the command in February 1992, she weighed 195 pounds. She had been at a previous high of 210 pounds after the birth of her second child but had lost some 15 pounds while with the Marines (she's an 8404 -- a medical field service technician).

During Culver's first few months at the naval hospital, she gained back 5 pounds. "I was put on the remedial program," she said, "which made me mad because I was passing the requirements

of the PRT anyway."

After her initial resentment, however, she put her heart and mind into the task at hand and undertook a vigorous exercise regimen.

In addition to the scheduled exercises of the remedial program, she took it one step further and started exercising three times a week for two hours a day -- sit-ups, push-ups, a two-and-a-half-mile run and 45 minutes of aerobics.

Today, after a year of hard work, Culver is no longer 200 pounds. She has dropped 50 pounds and is a fit and trim 150, the recommended weight for her height of 5 feet 9 inches.

"If your peers are trying to lose weight," said Culver, "it would help to give them encouragement and support. People would come out and give me compliments, and it made me happy and increased my resolve to exercise harder."

She also credits the Wellness aerobics instructors, whom she said volunteer their time and abilities to help fellow shipmates get ready for the Physical Readiness Test.

She also outlined some of the things that helped her with her program, like watching her diet by staying away from red meats, using no extra salt, and sticking to diet sodas and black or unsweetened coffee or tea.

Culver said she drank more water, ate more fruits and vegetables and controlled the habit of binging. She said she has learned to use exercise to release stress and that gives her a chance to meditate spiritually.

Story by HM2 Edgar Nem Singh

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4. Professional Notes: Information on upcoming symposiums or conferences of interest to Navy Medical Department personnel and wrap-ups on ones attended. Anyone with information to share in this section should contact the editor (see the last paragraph of this message on ways to do so).

Scheduled Meetings:

-- 13-17 November 1993, Association of Military Surgeons of the United States, 100th Annual Meeting, San Antonio.

-- 18-20 November 1993, American Academy of Medical Administrators, 36th Annual Conference and Convocation, San Antonio.

-- 19-21 November 1993, AMA regional meeting, "The AMA Brings Washington to You," Philadelphia. For information call 1-800-621-8335.

-- 20 November 1993, AMA regional meeting, "Physicians Forum: Agenda for Action," Philadelphia. For information call 1-800-621-8335.

-- 7-10 December 1993, Navy Aeromedical Problems Course and Aerospace Medicine Technician Problems Course. For information, call (904) 452-2457/2458, DSN 922-2457/2458. (Also see following article.)

-- 25 February - 4 March 1994, 35th Navy Occupational Health and Preventive Medicine Workshop. For information, contact CAPT Richard L. Buck, (804) 444-7575, ext. 451.

-- 29-31 March 1994, Sea-Air-Space Exposition, Sheraton

Washington Hotel, Washington, DC. For information, contact  
Pamela Broberg, Navy League of the United States, (703) 528-1775.  
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5. November observances and events occurring 14-21 November:  
November

American Heart Disease Prevention Month  
Child Safety and Protection Month  
National Diabetes Month  
National Epilepsy Awareness Month  
American Indian Heritage Month  
14 November: American Education Week begins  
14 November: National Geography Awareness Week begins  
14 November: Snore Day  
15 November: National Children's Book Week begins  
17 November: National Young Reader's Day  
18 November: Great American Smokeout/Navy Smokeout Day  
21 November: National Adoption Week begins

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